

USSR

UDC: 621.762.2:669.71

ZHILKIN, V. Z., KUZNETSOV, A. N., GORBUNOV, Yu. A., SHEPEL'SKIY, N. V.

"Influence of Temperature of Aluminum Melt and Rotation Rate of Cooling Fluid on Formation of Granule Shape During Centrifuging"

Liteyn. Proiz-vo, Metalloved. i Obrabotka Met. Davleniyem (Foundry Production Metal Science and Pressure Working of Metals -- Collection of Works), No 6, Krasnoyarsk, 1972, pp 92-94 (Translated from Referativnyy Zhurnal Metallurgiya, No 8, 1973, Abstract No 8G392, by the authors).

Translation: The influence of the temperature of a melt and rate of rotation of the cooling medium on the shape of Al granules produced by the centrifugal method is studied. The optimal intervals of values of these factors for the production of particles of equiaxial form are determined. 1 figure, 3 biblio. refs.

1/1

- 1 -

USSR

UDC: 669.14:621.785.545

SHEPELYAKOVSKIY, K. Z., YEMEL'YANOVA, L. G., ALEKSARHIN, G. F.

"Selection of Optimal Modes of Induction Heating for Hardening as a Function of Initial Structure"

Sb. Tr. Mosk. Vech. Metallurg. In-t [Collected Works of Moscow Permanent Institute for Metallurgy], 1972, No 12, pp 424-429 (Translated from Referativnyy Zhurnal Metallurgiya, No 8, 1973, Abstract No 8I866, by the authors).

Translation: Modes of induction heating are studied for the initial structures of steels with various degrees of differentiation, characterized quantitatively. It is demonstrated how the heating mode must be changed to produce optimal structure and properties. 2 figures, 2 tables, 3 biblio. refs.

1/1

Heat Treatment

USSR

UDC: 669.14:621.785.545

SHEPELYAKOVSKIY, K. Z.

"Hardening of Steel by Heat Treatment with Induction Heating"

Sb. Tr. Mosk. Vech. Metallurg. In-t [Collected Works of Moscow Permanent Institute of Metallurgy], 1972, No 12, pp 409-413 (Translated from Referativnyy Zhurnal Metallurgiya, No 8, 1973, Abstract No 8I866, by the author).

Translation: A review on the theory and practice of heat treatment by induction heating. 1 figure, 1 table, 11 biblio. refs.

1/1

USSR

UDC 669-156.3:620.178

SHEPELYAKOVSKIY, K. Z., and OSTROVSKIY, G. A., Moscow Evening Institute of Metallurgy, Plant imeni V. I. Lenin

"The Grain "Superhardness" of Chilled Steel"

Moscow, Metallovedeniye i Termicheskaya Obrabotka Metallov, No 4, 1971, pp50-53

Abstract: The effect of austenite grain size on the hardness of chilled steel was experimentally investigated on specimens of steels 40 and U8, (3 x 10 x 110 mm), prepared from preliminarily improved skelps, and of samples (28 mm in diameter) of steel 45. It is demonstrated that the hardness depends linearly on the grain size and that the phase cold hardening, determined by the rapid formation of austenite, does not result in a noticeable increase of hardness. A reliable exposure of the effect of grain size on the increase of hardness of chilled steel was found to be possible only on the basis of a grain size reduction from 7-8 to 14-15 balls with rates of 100-1000 deg/sec. A maximum Rockwell Superhardness of the ball 2 can be obtained. Three illustrations, three tables, eight bibliographic references.

1/1

S
Heat Treatment

UDC (047):621.735.835

USSR

SHEPELYAKOVSKIY, K. Z., KAL'NER, V. D., and NIKONOV, V. E., Automobile Plant
Leningrad Likhachev

"Technique of Steel Heat Treatment During Induction Heating"

Moscow, Metallovedeniye i Termicheskaya Obrabotka Metallov, No 11, Nov 70, pp
7-12

Translation: Development of a theoretical concept on the effect of the degree of heterogeneity in the initial structure on the uniformity of the temperature field during electrical heating is discussed. The question of thermal parameters and displacement of the interval of phase transformations during a high rate of electric heating is considered, as is the problem of super-hardening at surface induction hardening. The special features in the application of induction hardening, as a method of increasing the structural strength of steel, are considered. Specifically, a discussion is presented of the method of surface hardening during deep induction heating which produces maximum strength properties at minimum alloying of steel and eliminates the formation of cracks during hardening.

1/1

Acc. Nr.:

AP0046772

Ref. Code: URB0113

USSR

UDC 621.785.545

S
SHEPELYAKOVSKIY, K. Z., Doctor of Technical Sciences, VOSKRESENSKIY, V. V.,
Candidate of Technical Sciences, LAFSHIN, K. P., SURIN, S. S., CHUDINOVSKIY, T. S.,
ORLOVSKIY, A. G., ROZENTAL', G. A., and STEPIN, A. L., Moscow Evening Metallurgical
Institute, Moscow Auto Plant imeni Likhachev

"High-Frequency Thyristor Converter for Induction Hardening Installations"

Moscow, Avtomobil'naya Promyshlennost' (Motor Vehicle Industry), No 1, 1970,
pp 28-29

Translation: A thyristor frequency converter and a dynamoelectric one are
compared. The power circuit and control and protection circuits of a 100 kw
2500 cps thyristor converter for an induction hardening installation are described.
(4 illustrations)

18 87

Reel/Frame

19790076

USSR

UDC 669.15.018.8(088.8)

FEDOTOVA, L. S., ALEKSEYENKO, M. F., POTAK, YA. M., BELYAKOVA, V. A., ORZHEKH-
OVSKIY, YU. F., SHEPETOV, V. A., TOPILIN, V. V., DORONIN, V. M., KLYUYEV,
M. M.

"Stainless Steel"

USSR Author's Certificate No 276434, Filed 25 Jul 68, Published 13 Oct 70
(from RZh-Metallurgiya, No 4, Apr 71, Abstract No 4I637P)

Translation: A steel for operation at temperatures up to 600° is proposed with the following composition (in %): C 0.05-0.09, Cr 10.5-12, Ni 1.4-1.8, Mo 0.35-0.5, Nb 0.06-0.15, V 0.15-0.25, Si < 0.6, Mn < 0.6, Ce < 0.02. The ratio of the alloying elements satisfies the formula $0.68\% \text{ Cr} + (\% \text{ Mo} + \% \text{ V} + \% \text{ Si}) + 0.5\% \text{ Nb} - (30\% \text{ C} + \% \text{ Ni} + 0.5\% \text{ Mn}) < 6.6$. After quenching from 1,000° and tempering at 570°, at 20, 500, and 550° the steel has σ_B of 120, 70, and 55 kg/mm², σ_T of 100, 75, and 55 kg/mm², δ of 12% and ψ of 60-65%, respectively; σ_{500}^{100} and σ_{550}^{100} are 56 and 32 kg/mm², respectively.

1/1

- 65 -

1/2 033 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--EFFECT OF TEMPERATURE ON ION EXCHANGE KINETICS IN THE PRESENCE OF
COMPLEXING REAGENTS -U-
AUTHOR--(04)-MATORINA, N.N., SAFONOVA, N.D., SHEPETYUK, L.V., CHMUTOV, K.V.
COUNTRY OF INFO--USSR
SOURCE--Zh. Fiz. Khim. 1970, 44(2), 486-90
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--EUROPIUM, CATION EXCHANGE RESIN, ACTIVATION ENERGY, ENTROPY,
HEAT EFFECT, COMPLEX COMPOUND, REACTION KINETICS/(U)KUZ ION EXCHANGE
RESIN
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3002/1210 STEP NO--UR/0076/70/044/002/0486/0490
CIRC ACCESSION NO--AP0128628

UNCLASSIFIED

2/2 033

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0128628

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. BY THE MEASURING AND CALCN. METHOD THE INTERNAL DIFFUSION COEFFS. OF EU PRIME POSITIVE POSITIVE POSITIVE IN CATION EXCHANGER KU,2 IN THE PRESENCE OF 0.01 M DIETHYLENETRIAMINEPENTAACETIC ACID WERE OBTAINED AT PH 2.0-3.7 AND FOR 30, 55, AND 85DEGREES. ALSO, THE ACTIVATION ENERGIES AND ENTROPIES OF ACTIVATION WERE CALCD. FOR VARIOUS TEMPS. AND PH. IN THE CASE OF FORMATION OF NONSORBING COMPLEXING IONS OR NONSORBING FORMS OF M(OH) SUBN (OWING TO TH EHYDROLYSIS) VALUES OF THE APPARENT ACTIVATION ENERGY AND ENTROPY OF ACTIVATION DEPEND ON PH AND TEMP. THE INCREASE OF CONCN. OF NONSORBING COMPLEXING IONS OR OF CONCN. OF M(OH) SUBN IS ACCOMPANIED BY THE INCREASING THERMODYNAMIC FUNCTIONS STUDIED. THE DEPENDENCIES OF EFFECTIVE INTERNAL DIFFUSION COEFFS., AND THE APPARENT ACTIVATION ENERGY AND THE ENTROPY OF ACTIVATION ON PH AND ON TEMP. CONFIRM THE MECHANISM OF SORPTION OF IONS IN THE PRESENCE OF COMPLEXING REAGENTS: THE RATE OF INTERNAL DIFFUSION PROCESSES DURING FORMATION OF NONSORBING COMPLEX IONS WITHIN IONEXCHANGER GRAINS IS DEPENDENT ON THE RATIO OF IONS BOUND IN A COMPLEX AND FREE IONS IN THE IONEXCHANGER PHASE. FACILITY:
INST. FIZ. KHIM., MOSCOW, USSR.

UNCLASSIFIED

USSR

SHEPILOV, M. A.

"Iterative Method of Solution of a Problem in Linear Programming"

Uch. zap. Vladimir. gos. ped. In-t [Scientific Writings of Vladimir State Pedagogics Institute], Vol 38, 1971, pp 261-279, (Translated from Referativnyy Zhurnal, Kibernetika, No 2, 1972, Abstract No 2 V536).

NO ABSTRACT.

1/1

- 20 -

USSR

SHEPILOV, M. A.

"Method of Solution of Problems of Linear and Convex Programming"

Uch. zap. Vladimir. gos. ped. In-t. [Scientific Writings of Vladimir State Pedagogics Institute], Vol 38, 1971, pp 250-260 (Translated from Referativnyy Zhurnal, Kibernetika, No 2, 1972, Abstract No 2 V564 unsigned).

Translation: An iterative method is suggested.

1/1

USSR

UDC: 535.373.2

GROSS, Ye. F. (Deceased), STAROSTIN, N. V., SHEPILOV, M. P., and SHEKHMAMET'YEV, R. I.

"Spectroscopic Investigation of Energy Levels of Bielectrons or Biholes in a Bismuth Iodide Crystal"

Moscow, Izvestiya Akademii Nauk SSSR--Seriya Fizicheskaya, No 4, 1973, pp 885-890

Abstract: This article is the continuation of work begun in an earlier paper (Gross, Ye. F, et al, Pis'ma ZhETF, 13, 1971, p 320) describing experimental research into exciton states in BiI_3 crystals in which a hydrogen-like series of resonance lines of radiation and absorption originating in the shortwave rather than the longwave spectral region was discovered. The results of further experimental work along this line are discussed in the present paper. The authors assert that the basic results of the experimentation can be interpreted if it is assumed that this series of lines is connected with a special type of optical transition in semiconductors, a transition between two electron zones, or two hole zones; it can be considered as a direct interzone transition

1/2

USSR

UDC: 535.373.2

GROSS, Ye. F., et al, Izvestiya Akademii Nauk SSSR--Seriya fizicheskaya, No 4, 1973, pp 885-890

accompanying the formation of a bielectron or bihole by analogy with the formation of an exciton for the case of ordinary zone-zone transitions between an upper valent zone and the conductivity zone. Absorption and luminescence spectra of the inverse series in BiI_3 crystals are shown. It is noted that, with better crystals and the use of a high-dispersion spectrometer, the terms of the inverse absorption series at temperatures of $1.6\text{--}4.2^\circ\text{K}$ have doublet structures and a prediction made on the basis of the theory has been experimentally verified.

2/2

- 48 -

USSR

UDC: None

GROSS, Ye. F. (Deceased), STAROSTIN, N. V., SHEPILOV, M. P., and SHEKHMANET'YEV, R. I.

"Fine Structure of the Energy Levels of a Bielectron or Bihole in a BiI_3 Crystal"

Leningrad, Fizika Tverdogo Tela, vol 14, No 7, 1972, pp 1942-1947

Abstract: From the experimental discovery of an inverted series of hydrogen-like lines in BiI_3 crystals, it has been concluded that the phenomenon was caused by the formation of a bielectron a system of twin charged particles, electrons, or holes, with antiparallel spins. Further experimentation was conducted by the men named above, and the results of that experimentation are given in this paper. Included also are theoretical investigations into the spectroscopic characteristics of the two types of twin particles in poorly symmetrical BiI_3 crystals. Experimentally, it was found that in a DFS-13 spectroscope with a dispersion of about $2\text{\AA}/\text{mm}$ the BiI_3 spectrum had a fine structure and some of its lines were doublets, the distance between the doublet components varying inversely as the quantum number. The experiments
1/2

USSR

GROSS, Ye. F. (deceased), et al., Fizika Tverdogo Tela, vol 14, No 7, 1972, pp 1942-1947

of the present paper also used more perfect crystals. In the theoretical part of the paper, the authors obtain an expression for the energies of the doublet components which indicates that the doublet splitting of the d-bielectron or bihole decreases with increasing line number according to the relation $1/n^2$. This agrees with the experimentally observed variation. The authors, members of the A. A. Zhdanov State University of Leningrad and the A. F. Ioffe Physico-Technical Institute of Leningrad, express their gratitude to N. Drugova, who participated in the experiments.

2/2

- 54 -

USSR

UDC 669.716:620.178.3

STEPHOV, M. N., and TRUSHKIN, M. A., Moscow Aviation Technological Institute

"Evaluation of Changes in Fatigue Properties of Aluminum Alloys Under the Effect of Variable Loads by Means of Secondary Fatigue Curves"

Moscow, Zavodskaya Laboratoriya, Vol 38, No 7, 1972, pp 860-864

Abstract: A model is proposed for evaluating, with the aid of secondary fatigue curves of equal damageability, the changes in fatigue properties of aluminum alloys undergoing deformation under the effect of variable loads. Secondary fatigue curves are defined as the curves obtained in testing a previously damaged material. Three tables, 5 figures, 3 references.

1/1

USSR

UDC 612.13-088.4

SAAKOV, B. A., LUBE, V. M., SHEPOTINOVSKIY, V. I., and TITKOV, B. P., Rostov
Medical Institute

"The Regional Blood Circulation Studied by the Ultrasound Method"

Moscow, Byulleten' Eksperimental'noy Biologii Meditsiny, No 5, 1971, pp
116-119

Abstract: A bloodless method of deep zonal ultrasonic sphygmography based on the principles of acoustic bioecholocation is described. It yields specific information about the state of any part of the vascular system regardless of its site (in bone canals, skull, soft tissues, etc.) or the amount of ultrasound absorbed by the tissues surrounding a blood vessel. An ultrasonic sensor using a reverse and direct piezo effect emits short acoustic impulses toward a blood vessel under study and receives a signal reflected from it. If there is an increase in the volume of blood entering the vessel, its diameter widens, thereby increasing the area of the lateral reflecting surface. The amplitude of the reflected signal grows at the same time. If there is a decrease in the volume of blood entering the vessel, its diameter narrows and the amplitude of the reflected signal decreases accordingly.

1/2

USSR

SAAKOV, B. A., et al., Byulleten' Eksperimental'noy Biologii Meditsiny,
No 5, 1971, pp 116-119

Thus, changes in the amplitude of the signal are proportional to the degree
of blood supply of the vessel. These changes are recorded on an ink-writing
device.

2/2

- 69 -

1/2 012 UNCLASSIFIED
TITLE--PNEUMATIC HYDRAULIC CONVERTER -U- PROCESSING DATE--04DEC70
AUTHOR--(02)-SHEPOVALOV, V.D., PUSHKIN, V.A.
COUNTRY OF INFO--USSR
SOURCE--USSR AUTHOR'S CERTIFICATE NO 258735
REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI NO 1 JAN 70
DATE PUBLISHED--JAN70
SUBJECT AREAS--MECH., IND., CIVIL AND MARINE ENGR
TOPIC TAGS--PNEUMATIC DEVICE, HYDRAULIC EQUIPMENT, AUTHOR CERTIFICATE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3004/0342 STEP NO--UR/0482/70/000/000/0000/0000
CIRC ACCESSION NO--AA0131037
UNCLASSIFIED

2/2 012

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AA0131037

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A PNEUMATIC HYDRAULIC CONVERTER WHICH CONSISTS OF A DISTRIBUTING AND OVERFLOW CHAMBER IS PRESENTED. ITS PECULIAR FEATURE IS THE FACT THAT FOR THE PURPOSE OF INCREASING RELIABILITY AND SIMPLIFYING DESIGN, A CYLINDER BARREL WITH COAXIAL INTERTHROTTLE CHAMBER IS INSERTED INTO IT WHICH IS JOINED WITH THE DISTRIBUTING AND OVERFLOW CHAMBERS BY THROTTLES OF UNIFORM CROSS SECTION OF SMALL AND LARGE DIAMETER RESPECTIVELY, WHICH ARE ARRANGED COAXIALLY ALONG THE AXIS OF THE BARREL. FOR AIR FEED, THE CYLINDER BARREL CONTAINS AN ANNULAR SLIT WITH CHANNELS WHICH ARE TANGENT TO THE INTERTHROTTLE CHAMBER.

UNCLASSIFIED

Radiobiology

USSR UDC 617-001.28-06:616.441-089.87)-092.9-089:616.419-089.843

CHERTKOV, I. L., Professor, NEMENOVA, N. M., Professor, NOVIKOVA, M. N.,
KOTLYAROV, A. M., MALANINA, V. N., UDALOV, G. A., ROGACHEVA, L. S., and
SHEPSHELEVICH, L. I., Laboratory of Myelo-Hemotherapy of Acute Radiation
Sickness, Pathological Anatomy Laboratory, and Cytological Laboratory,
Central Institute of Hematology and Blood Transfusion, USSR Ministry of
Health, Moscow

"Transplantation of Allogeneous Bone Marrow to Thymectomized Irradiated
Monkeys"

Moscow, Problemy Gematologii i Perelivaniya Krovi, Vol 16, No 3, Mar 71,
pp 45-53

Abstract: Since transplantation of allogeneous bone marrow to irradiated
animals for the purpose of alleviating radiation sickness gives rise to
a secondary disease due to differentiation of the transplanted tissue into
lymphocytes which enter into an immunological reaction with the host, a
study was performed in which thymectomized monkeys were irradiated with
800-1,000 r and then given allogeneous bone marrow transplants. The thymec-
tomy did not prevent the development of the secondary disease, but made it
1/2

USSR

CHERTKOV, I. L., et al., Problemy Gematologii i Perelivaniya Krovi, Vol 16,
No 3, Mar 71, pp 45-53

considerably milder and promoted regeneration of hematopoiesis of the
donor type. Histological examinations indicated that bone marrow stem
cells play an important role in the development of the secondary disease.

2/2

- 19 -

USSR

UDC: 621.317.725

GORELIKOV, N. I., Candidate of Technical Sciences, GUTSMAN, V. G., Engineer, CHAYKOVSKIY, O. I., Engineer, SHEPTEBAN', R. Z., Engineer

"Digital Comparater Voltmeters"

Moscow, Pribery i Sistemy Upravleniya, No 1, Jan 72, pp 48-49

Abstract: The article describes the F485 and F 486 digital AC voltmeters which operate on the principle of nonsimultaneous comparison of inhomogeneous voltages. The instruments were developed by the cooperative efforts of the Institute of Automation and Electrometry of the Siberian Department of the Academy of Sciences of the USSR and the Special Design Office at the L'vov Electrical Measuring Instrument Plant. A block diagram of the instruments is given, and the operating principle is described. The measurement error in the frequency range from 45 Hz to 20 kHz is no greater than $\pm(0.1 + 0.1V_x/V_f)\%$ for the F485, and $\pm(0.3 + 0.2V_x/V_f)\%$ for the F486, where V_x is the instantaneous value of the measured voltage, and V_f is the

1/2

USSR

UDC 621.311.153.501.21.001.24:631.3

GAMI, A. Z., KRUMM, L. A., SHER, I. A.

"Requirements Imposed on Programs for Calculating the Stationary Conditions of Power Systems"

V sb. Probl. tekhn. elektrodinamiki (Problems of Technical Electrodynamics -- collection of works), vyp. 25, Kiev, Naukova Dumka Press, 1970, pp 53-56 (from RZh-Elektrotehnika i Energetika, No 4, Apr 71, Abstract No 4 Ye252)

Translation: The requirements imposed on the programs for calculating stationary conditions are described. The conditions that preparation of the initial information must satisfy are indicated. The basic procedural principles are described on the basis of which a program for calculating the stationary conditions has been developed at the Siberian Power Engineering Institute of the Siberian Department of the USSR Academy of Sciences. The bibliography has 2 entries.

1/1

- 121 -

USSR

UDC: 621.396.677:621.397(088.8)

SHER, S. I., KONSTANTINOVSKIY, A. G., Ukrainian Radio and Television Trust

"A Device for Automatic Remote Activation and Deactivation of a Community Television Antenna Amplifier"

USSR Author's Certificate No 265937, filed 11 Dec 67, published 30 Jun 70
(from RZh-Radiotekhnika, No 12, Dec 70, Abstract No 12B106 P)

Translation: The proposed device contains a selective device for producing controlling signals with an actuating mechanism for activating and deactivating the power supply to the amplifiers. To switch on the amplifier only when the TV receivers connected to the antenna are in operation, the selective device is connected to the braid of the main antenna cable and tuned to one of the harmonics of the horizontal frequency of the TV signal. One illustration. Resumé.

1/1

- 33 -

USSR

UDC: 621.396.622

SHER, V. B., KAYEVSKIY, Z. M., MAKAROV, G. V.

"A Synchrophase Video Pulse Frequency Multiplier Based on Semiconductor Devices"

V sb. Poluprovodn. pribory v tekhn. elektrosvyazi (Semiconductor Devices in Electrical Communications Technology--collection of works), vyp. 7, Moscow, "Svyaz", 1971, pp 107-112 (from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6D68)

Translation: Devices are described for frequency multiplication and division of video pulses, keeping input and output signals in phase. Two illustrations, bibliography of one title. Resumé.

1/1

- 9 -

USSR

UDC [546.185+546.47]:54-39:621.892.099.6

SHER, V. V., MARKOVA, E. I., KHANAKOVA, L. G., KUZ'MINA, G. N., SANIN, P. I.,
Institute of Petrochemicals Synthesis imeni A. V. Topchiev, USSR Academy
of Sciences

"Interaction of Zinc Dialkyl Dithiophosphates With Hydroperoxides"

Abstract: Laboratory studies on interaction of Zn dialkyl phosphates with hydroperoxides showed the possibility of two mechanisms: (1) a radical mechanism with formation of bis-(dialkylthiophosphone)-disulfides and basic Zn dialkylphosphates; and (2) an ionic mechanism with formation of dialkyl-monothiophosphoric acid salts and products of extensive salt conversion. Bis-(dialkylthiophosphone) disulfide may react with hydroperoxide to form bis-(dialkyl phosphone) disulfide, which is unstable and forms acid in the presence of water by an ionic mechanism. Basic conversion products of Zn dialkyl thiophosphates with antioxidant properties are formed owing to retardation of the oxidation in the presence of dialkyl dithiophosphates. The effectiveness of Zn dialkyldithiophosphates as antioxidants (hydroperoxide decomposition products) decreases with increase in the ionic part of the reaction, i.e., with increase in polarity of the medium and in the presence of water.

1/1

- 42 -

1/2 035 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--ADDITIVE FOR AN INTERNAL COMBUSTION ENGINE FUEL -U-
AUTHOR--(05)-SANIN, P.I., ARABYAN, S.G., SHER, V.V., KHOLOMONOV, I.A.,
GORDASH, YU.T.
COUNTRY OF INFO--USSR
SOURCE--U.S.S.R. 266,457
REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRATSY, TOVARNYE ZNAKI 1970,
DATE PUBLISHED--17MAR70
SUBJECT AREAS--PROPULSION AND FUELS
TOPIC TAGS--CHEMICAL PATENT, CARBOXYLIC ACID, ESTER, KETONE, ACETYLENE,
MINERAL OIL, FUEL ADDITIVE, INTERNAL COMBUSTION ENGINE, ORGANOALUMINUM
COMPOUND
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3005/0879 STEP NO--UR/0482/70/000/000/0000/0000
CIRC ACCESSION NO--AA0132969
UNCLASSIFIED

2/2 035

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AA0132969

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TITLE ADDITIVE CONSISTS OF
16-25PERCENT POLYALUMINOXANES AND CARBOXYLIC ACID ESTERS AND 1-5PERCENT
BETA DIKETONE, E.G. ACETYLACETONE, OR BETA KETO ACID ESTER, E.G.
ACETOACETIC ESTER, IN MINERAL OIL.
INSTITUTE OF PETROCHEMICAL SYNTHESIS.
SCIENTIFIC RESEARCH TRACTOR INSTITUTE.

FACILITY: TOPCHIEV, A. V.,
FACILITY: STATE UNION

UNCLASSIFIED

USSR

UDC 66.063.672:543.825.3

TIKUNOVA, I. V., SHER, V. V., and SANIN, P. I., All Union Scientific Research and Development Institute of Synthetic Lubricants, Shchekbekino; Institute of Petrochemical Synthesis imeni A. V. Topchiyev Acad. Sc. USSR

Moscow, Neftekhimiya, Vol 13, No 1, Jan-Feb 73, pp 141-144

Abstract: Absorption of zinc dialkyl dithiophosphates on oxidized carbon black particles was studied. It was established that oxidized carbon black particles adsorb 2-3 times as much zinc dialkyl dithiophosphates as crude carbon black. Adsorption of zinc dialkyl dithiophosphates increases the stability of carbon black suspension in hydrocarbon media. The degree of the stability of carbon black heptane suspension increases with increased concentration and increased molecular weight of the zinc stabilizer. Mixtures of dialkyl dithiophosphates are more effective than individual compounds.

1/1

USSR

UDC: 534.222.2

POLYAK, E. B. and SHER, Ye. N.

"Shape of the Blowout Eddy in the Explosion of a String Charge in a Two-Layered Medium"

Moscow, Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, No 2, 1973, pp 143-146

Abstract: This paper is the consequence of an earlier article (V. M. Kuznetsov, O forme voronki vybrosa pri vzryve na poverkhnosti grunta — Shape of the Blowout Eddy in an Explosion on the Ground Surface — FMTF, No 3, 1960) in which the following problem was posed. The ground is modeled by a medium which is an ideal compressible liquid flowing at velocities exceeding some critical value, and an absolutely solid body at lower velocities. In the impulse statement of the problem, the blowout eddy is defined as the line of a current whose absolute value of velocity is equal to the critical value. In the present paper, the stated problem is to determine the form of the blowout eddy in the explosion of a string charge placed in the ground at a certain depth and covered by a layer of stronger material to a second depth. The authors

1/2

USSR

UDC: 534.222.2

POLYAK, E. B., et al, Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, No 2, 1973, pp 143-146

begin their theoretical analysis with a mathematical statement of the problem using a complex flow potential, in terms of dimensionless Cartesian variables, and consider the effect of the parameter values on the geometry of the current.

2/2

- 44 -

USSR

UDC 532.593

KOSHELEV, E. A., SHER, YE. N., Novosibirsk

"Bubble Development in the Case of Explosion on the Water Surface"

Novosibirsk, Fizika gorennya i vzryva, Vol 8, No 3, 1972, pp 441-443

Abstract: An experimental study was made of the movement of a liquid when a charge is exploded on its free surface up to the time of fill-in of the bubble; a simulation law is proposed. A characteristic feature of a surface explosion is that the detonation products shoot into the atmosphere and the cavity of the explosion bubble is at all times joined to the atmosphere. When the charge is deeper, on movement for some critical density liquid begins to cut off part of the explosion products forming an underwater bubble. The movement of the underwater bubble depends sharply on atmospheric pressure, but the surface bubble does not. The law of movement of the free surface can be written in the form

$$R/R' = f(t/t', \phi).$$

Where R , ϕ are the surface coordinates of the liquid (the angle ϕ is reckoned from the free surface of the liquid) and t is time. For a fuse charge

$$R' = (E/\rho g)^{1/3}, \quad t' = (E/\rho g^4)^{1/6}$$

1/2

USSR

KOSHELEV, E. A., et al., Fizika goreniya i vzryva, Vol 8, No 3, 1972, pp 441-443

where E is the energy of the explosion, ρ is the liquid density, g is the gravitational acceleration. For a concentrated charge

$$R' = (E/\rho g)^{1/4}, \quad t' = (E/\rho g^5)^{1/8}.$$

The fuse charge was studied in more detail. E can be considered the TNT equivalent of the explosion of the experimental wire. E increases with the depth and is 50-70% of the energy stored in the charge condenser. The data for both types of charges confirm the presented mathematical descriptions.

USSR

UDC: 517.9:533.011

SHER, Ye. N.

"On the Mechanism of Motion of Snakes and Fish"

V sb. Nekotor. probl. mat. i mekh. (Some Problems of Mathematics and Mechanics--collection of works), Leningrad, "Nauka", 1970, pp 267-276 (from RZh-Matematika, No 5, May 71, Abstract No 5B481)

Translation: The author considers the problem of motion of an elastic rod in a flat channel without friction and also in the case of viscous or dry friction on the walls. B. Rusanov.

1/1

USSR

UDC: 621.373.001.24:621.372.413

VINOGRADOV, G. I., KREYNOVICH, Ya. R., RADETSKIY, M. N., SLUTSKIY, P. G.,
SHERAYZIN, A. K., CHISTYAKOV, V. A.

"A Device for Tuning Resonant Circuits"

USSR Author's Certificate No 280579, filed 5 Jan 67, published 17 Nov 70
(from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6D384 P)

Translation: A device is proposed for tuning resonant circuits such as cavity circuits. The device contains a two-armed lever connected by a rod to the tuning element of the circuit to be adjusted, and resting on the cams of a discrete controlling mechanism. To improve the operating precision of the device, the two-armed lever is made in the form of a yoke equipped with regulating screws and connected to a set of levers whose spring-loaded shanks rest on the cams of the control mechanism. Two illustrations. V. P.

1/1

SHERBAF, D.M.

19 Nov 73

(4)

EXPERIMENTAL STUDY OF DISTORTION OF A LASER
LIGHT PULSE DURING PROPAGATION IN THE SEA

[Article by I. I. Kalinin, V. N. Polovin, A. L. Skrebin, and
D. M. Sherbaf, Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya,
1972, pp 168-174]

The development of pulsed lasers has not only intensified interest in the nonstationary problem of scattering but has also put in the hands of investigators a tool for studying multiple light scattering itself. The possibility has appeared, by using a laser with a burst lasting units of tens of nanoseconds and a receiver with high time resolution, of splitting a light signal propagating between two points of a medium into component elements differing in the length of the path of photons within the medium or in the number of acts of scattering experienced.

In [1, 2] the advisability was pointed out of representing the matrix of radiation transfer Π_{12} from point 1 to point 2 of a scattering medium in the form of the sum of the matrices $\Pi_{ik}^{(1)}$, corresponding to the various lengths of the photon path from point to point 2:

$$\Pi_{12}^{(1)} = \int_0^L \Pi_{12}^{(1)}(L) dL.$$

Such an approach permits decomposing the transfer matrix by degrees of probability of quantum survival and facilitates solution of the transfer equation, done by the method of successive calculation of scattering of increasing multiplicity.

The development of pulsed technology along the path of reduction of the signal length to the limit beyond which it would be possible to receive it as a δ -pulse can lead, if suitable polarizers and analyzers are used, to obtaining the components of the $\Pi_{12}^{(1)}$ transfer matrix experimentally.

USSR

UDC 541.123 / 541.139

USHAKOV, O. I., SHERBAKOV, L. M., Tul'sk Polytechnical Institute

"The Effect of Magnetic Treatment on the Refractive Index of Water"

Moscow, Zhurnal Fizicheskoy Khimii, Vol 44, No 5, May 70, pp 1307-1308

Abstract: Literature reports on the effect of magnetic treatment of water on its refractive index were analyzed and experiments were carried out to check the claims that magnetic treatment changes the refractive index of water. It was shown that with flow rates of up to 20-25 m/sec no effect of magnetic treatment on the refractive index could be seen. The reported phenomena may be due to water convection during mixing in the cuvettes, since the observed change in the refractive index of magnetically treated water disappears after a short period. It is stated that magnetic treatment of water may have possibly some effect on other structure sensitive properties -- it may affect the crystallization properties of various salts found in water.

1/1

5/22/08

6-73

VIII-10. GROWTH
SPINDLE STRUCTURE:

Article by S. I. Radufova "The Role of the Mother in the Development of the Child's Personality"

[illegible]

characterized by a high melting point. Therefore, in order to allow single crystals to grow, the compounds in this group, In_2S_3 , CdIn_2S_4 , CuIn_2S_4 , AgIn_2S_4 and also solid solutions based on them, the method of chemical reactions was used.

A study was made of the most probable reactions promoting transport of different compounds in compulsion. The study of the transport kinetics of single crystals permitted discovery of the optimal growth conditions of the crystals known by the method of chemical transport reactions of the stated that repeatedly growing facets have the same diffraction patterns and epigrams reduce. The crystal habit reaches $15 \times 10 \times 10$ mm as a result of annealing, permitting reduction of the number of anneals and are (2-3

The large crystals of the indicated compounds were obtained by a method of zone recrystallization. Technological conditions were developed for which the synthesis of the compounds was carried out in a combined zone cycle. In the specimens obtained, the dislocations were the effect of the etching agents. The selective etching agents were used for the dislocation picture formed around the impurities and scratches. Studies were also made of some physical properties of the named compounds. Studies of the recrystallization centers to a

USSR

UDC 576.858.8:633.11

SHERBAN, O. D., and OLIYNIK, A. M., Institute of Microbiology and Virology,
Academy of Sciences Ukrainian SSR

"Identification of the Virus of Wheat Streak in Moldavia"

Kiev, Mikrobiologicheskii Zhurnal, Vol 33, No 1, Jan/Feb 71, pp 56-60

Abstract: Examination of winter wheat crops in Moldavia in 1969 disclosed that the wheat was infected with streak mosaic. The crops were infested with four-legged mites of the family Eriophyoidea. By placing these mites on infected plants and then transferring them to healthy plants, the infection could be transmitted to healthy plants. The infection could also be transmitted by rubbing leaves of healthy plants with a mixture of the sap of infected plants and carborundum. By applying this method, the disease was transmitted from wheat to barley and corn plants. Seeds and soil did not transmit the infection. The virus in the sap of infected wheat plants was inactivated on heating the sap at 55-56°C for 10 min. It retained its infectiousness on dilution of the sap up to 1:1000 and for 2 and 7 days, respectively, on storage of the undiluted sap at room temperature and 4°C. The activity of the virus was preserved for more than 3 mos in infected green leaves stored at minus 8°C- minus 5°C. Examination under an electron micro-

1/2

USSR

SHERBAN, O. D., and OLIYNIK, A. M., Mikrobiologicheskii Zhurnal, Vol 33,
No 1, Jan/Feb 71, pp 56-60

scope indicated that the virus particles had a shape typical for the virus
of wheat streak mosaic. The virus was identical with that isolated earlier
in Romania and the Ukraine.

2/2

- 23 -

Genetics

USSR

UDC 575.24

BUDOVSKIY, E. I., KRIVISKIY, A. S., SVERDLOV, YE. D., and SHERBAN, T. P.,
Institute of Chemistry of Natural Compounds, Academy of Sciences USSR, and
Institute of Molecular Biology, Academy of Sciences USSR

"The Effect of Mutagens on Bacteriophage MS2 and Its Infectious RNA. III.
The Effect of O-Methylhydroxylamine. Analysis of the Kinetics of Inactivation"

Moscow, Genetika, No 1, 1971, pp 120-129

Abstract: Study of the inactivation of bacteriophage MS2 and its infectious RNA under the influence of O-methylhydroxylamine (OMHA) revealed a relationship between the chemical changes in the genome and the inactivating effect of OMHA. Some assumptions on the kinetics of modification of the cytidine residues in bacteriophage MS2 and its infectious RNA appear to have been experimentally confirmed. For example, the rates of individual stages of the reactions that occurred during the action of OMHA on the cytosine nucleus varied with the concentration of the reagent. The higher structures of polynucleotides and nucleoproteins apparently have a substantial effect on the reactivity of the cytosine nucleus. This makes it possible to calculate the contribution of the different kinds of modified residues to the inactivation process. The kinetics of modification of the cytidine residues in the

1/2

USSR

BUDOVSKIY, E. I., et al., Genetika, No 1, 1971, pp 120-129

monomers was found to be virtually independent of the ionic strength or presence of Versene. The influence of these factors on the kinetics of bacteriophage inactivation is ascribed to their action on the quaternary structure of the bacteriophage nucleoproteins.

2/2

- 10 -

1/2 015
UNCLASSIFIED
TITLE--ACTION OF MUTAGENS ON PHAGE MS2 AND ITS INFECTIOUS RNA. II.
COMPARATIVE STUDY OF THE KINETICS OF LETHAL AND MUTAGENIC EFFECTS OF
AUTHOR--(02)--KRIVISKIY, A.S., SHERBAN, T.P.
PROCESSING DATE--30OCT70
COUNTRY OF INFO--USSR
SOURCE--GENETIKA 1970, 6(1), 129-43
DATE PUBLISHED--70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--MUTAGEN, PHAGE, RNA, RADIATION INDUCED MUTATION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/1361
CIRC ACCESSION NO--AP0125009
STEP NO--UR/0473/70/006/001/0129/0143
UNCLASSIFIED

2/2 015
CIRC ACCESSION NO--AP0125009
ABSTRACT/EXTRACT--(U) GP-0-

UNCLASSIFIED

PROCESSING DATE--30OCT70

ABSTRACT. THE INACTIVATING EFFECT OF HNO SUB2 ON PHAGE MS2 AND ITS RNA WAS EXPONENTIAL; THE RATE OF RNA INACTIVATION WAS 1.5-2 FOLD THAT OF THE INTACT PHAGE. TREATMENT OF RNA WITH HNO SUB2 CAUSED FORMATION OF PLAQUE TYPE MUTANTS PHENOTYPICALLY SIMILAR TO SPONTANEOUS MUTANTS AND TO MUTANTS INDUCED BY HNO SUB2 IN THE INTACT PHAGE. THE RELATIVE NO. OF MUTANTS INCREASED LINEARLY WITH TIME OF MUTAGEN TREATMENT UP TO THE DOSES CORRESPONDING TO 2-3 TIMES THE LD. LINEAR DEPENDENCE OF THE NO. OF INDUCED MUTANTS IN THE WHOLE PHAGE WAS FOUND UP TO 10 TIMES THE LD. INACTIVATION OF MS2 RNA BY UV IRRADN. WAS EXPONENTIAL AND AT THE SAME RATE AS FOR THE INTACT PHAGE. UV IRRADN. INDUCED LETHAL BUT NOT MUTAGENIC DAMAGE IN THE INFECTIOUS RNA. FACILITY: INST. MOL. BIOL., MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC 632.38

SHERBAN, Ye. D., and ONISHCHENKO, A. N.

"Winter Wheat Mosaic and Its Vectors in Moldavia"

Kiev, Mikrobiologichnyy Zhurnal, Vol 34, No 6, Nov/Dec 72, pp 757-762

Translation of Russian Abstract: As a result of an examination of winter wheat plantings in a number of rayons of Moldavia during the summer of 1969-1970, we discovered the agent of winter wheat mosaic. The wheat mosaic virus afflicts primarily wheat and the disease manifests itself in two forms -- rosette and mosaic. Mosaic plants do not produce a rosette, lag behind in growth, rarely form ears, and sometimes the ears proliferate.

When sections of diseased leaves were immersed in an acid medium pH 4.5-5, needle-shaped crystals 10 microns in size were found. The wheat mosaic virus is not transmitted mechanically by the sap. The results of tests on transmission of the virus through the soil, by seeds, and also with plant remains proved negative. Under Moldavian conditions, the vectors of the wheat mosaic agent are the *Psammotettix striatus* L. and *Macrostelus laevis* Rib leafhoppers. During electron microscope investigation, bacilliform particles typical of the wheat mosaic virus were detected in the sap of diseased plants.

1/1

USSR

MOSKOVETS, S. N. (Deceased), SHERBAN, Ye. D., and OLEYNIK, A. N.

"Morphology of Wheat Streak Mosaic Virus Occurring in Moldavia"

Kishinev, Izvestiya Akademii Nauk Moldavskoy SSR, Seriya Biologicheskikh i Khimicheskikh Nauk, No 6, 1971, pp 30-34

Abstract: Wheat streak mosaic virus was found in recent years in various parts of the USSR -- Krasnodarskiy Kray, Rostovskaya and Voronezhskaya oblasts, Uzbekistan, Kazakhstan, the Ukraine, and Moldavia. In Moldavia, streak mosaic is the commonest and most injurious disease of wheat. Electron-microscopic examination of preparations of partly purified virus isolated from infected plants revealed viral particles in the form of slightly bent filaments. Measurement of 107 such particles showed that they ranged in length from 725 to 775 mμ, the average being 736 ± 1.69 mμ. Their diameter varied from 18 to 19 mμ. The viral particles found in diseased wheat plants on Moldavian fields are identical in shape and size to wheat streak mosaic virus occurring in other parts of the world.

1/1

- 24 -

USSR

UDC 536.521.038

SHERBINA, D. M., KIRICHENKO, A. P.

"Determination of Normal Reflecting Power in a Wide Temperature Interval on the Basis of the Reflection Indicatrix"

Tr. Metrol. In-tov SSSR (Works of Metrological Institutes of the USSR), No 110 (170), 1971, pp 71-97 (from Referativnyy Zhurnal, Metrologiya i Izmeritel'naya Tekhnika, No 12, Dec 71, Abstract No 10.32.1120)

Translation: A method is set forth for determining the spectral reflecting power during the incidence of light upon a surface along the normal. A formula is derived for computing the reflecting power on the basis of the reflection indicatrix. Consideration is given to measurement errors connected with the presence of a strong background, conversion of the reflection indicatrices, the finite time of establishment of the photo-receiver signal and the finite spectral width of the modulated light. 4 tables. 6 references.

1/1

- 89 -

USSR

LIPAYEV, V. V., KOLIN, K. K., SHEPEBROVSKIY, L. A.
"Software for Digital Control Computers"

UDC: 8.74

Matematicheskoye obespecheniye upravlyayushchikh TsVM (cf. English above),
Moscow, "Sov. radio", 1972, 528 pp, ill. 2 r. 10 k. (from RZh-Kibernetika,
No 6, Jun 72, Abstract No 6V525 K)

Translation: The paper deals with the basic problems of developing general software for digital computers used in systems of automated control of objects in real time. Consideration is given to software facilities of technological processes for planning algorithms and programs for digital control computers (programming, debugging, obtaining documentation), as well as to software for organizing the computational process in the operation of digital computers in a control system. Considerable attention is given to the goals and structure of synthesis of software systems for digital control computers, and also to methods and criteria for evaluating their effectiveness. Consideration is given to the standard structure of an operational system, operating conditions, and algorithms of basic programs of organization of the computational process. Methods of queuing theory are

1/2

USSR

LIPAYEV, V. V. et al., Matematicheskoye obespecheniye upravlyayushchikh TsVM, Moscow, "Sov. radio", 1972

used to study the various disciplines of monitoring computations in the case of unlimited waiting of customers in a queue and with loss of customers (messages) in a limited buffer memory of a digital computer. Problems and methods of automating the process of programming for digital control computers, programming languages, and also algorithms of translation and monitoring of mutually related large-volume programs are considered. A standard structure is presented for the system of automating programming and output of technical documentation for algorithms and programs. An analysis is made of the basic problems of automating debugging of algorithms and programs for digital control computers, the structure and circuitry of an automated debugging system.

2/2

- 50 -

USSR

UDC 539.5

DRITS, M. Ye., ROKHLIN, L. L., SHEREDIN, V. V., SHULVGA, Yu. N., Moscow

"Influence of Certain Factors on Dissipation of Energy During Elastic Oscillations in Magnesium Alloys"

Problemy Prochnosti, No 10, 1971, pp 62-66.

Abstract: This work presents the result of a study of the damping ability of one class of structural materials broadly used in technology -- magnesium alloys. The interest in the damping ability of magnesium alloys results from the fact that magnesium and certain of its alloys are characterized by high attenuation of elastic oscillations. The damping ability of alloys was determined using a torsional pendulum with solid circular specimens with a gauge section diameter of 6 mm and a length of 50 mm with oscillations with an initial amplitude of $3.3 \cdot 10^{-4}$ at the surface of the specimen. The damping ability was characterized by the logarithmic oscillation decrement. The studies resulted in production of a new alloy with good damping qualities and increased strength.

1/1

USSR

UDC 620.173.311.6:69.721

BRITS, M. Ye., FOKHAIN, L. L., SHEREDIN, V. V., and SHUL'CA, Ya. A., Institute of Metallurgy, Leningrad A. A. Baykov

"Magnesium Alloys With High Damping Capacity"

Moscow, Metallovedeniye i Termicheskaya Obrabotka Metallov, No 11, Nov 70, pp 48-51

Abstract: This study discusses the basic properties of alloys of the system Mg-Zr, considers the effect of alloying and mechanical and heat treatment on their damping ability, and compares their properties with those of other alloys. The data indicate that magnesium has the same damping ability as tin, lead, and zinc, and considerably surpasses that of aluminum, copper, titanium, and niobium. The Mg-Zr alloy has the same damping ability as pure magnesium. The mechanical properties and damping decrement of Mg-Zr alloys depend very little on the casting conditions. The annealing of cast Mg-Zr alloys has no effect on their mechanical properties. The damping decrement during annealing of cast Mg-Zr alloys remains stable. The pressure treatment of Mg-Zr alloys reduces their damping ability. Reduction in the damping decrement during introduction of strengthening additives into magnesium or Mg-Zr alloys can be explained by the fact that they retard the process of spinning. The same is true of increasing the damping decrement of deformed alloys during recrystallization and grain growth. 1/1

- 27 -

USSR

UDC 621.396.677

SHERED'KO, YE.YU.

"Effect Of Terrain Relief On The Directional Properties Of Cophased Short-Wave Antennas"

Moscow, Elektrosvyaz', No 10, Oct 71, pp 59-65

Abstract: An evaluation is given of the effect exerted by the terrain relief on the directional properties of antennas. Using as an example the standard antennas SGD 4/4 RA and CGD 2/4 RA with average heights of suspension equal to $1.25 \lambda_0$ and $1.00 \lambda_0$, respectively (λ_0 is the structural wave), the effect was investigated of longitudinal slopes of the earth's surface on their directional properties. [For the antennas investigated, the lengths of the slopes were respectively equal to $(15 - 30) \lambda_0$ and $(10 - 20) \lambda_0$.] It is shown that under specific conditions the longitudinal slopes assist in an increase of the effectiveness of the antennas. Received by editors 4 June 71. 3 ref. 13 ill. 3 tab.

1/1

USSR

SHERED'KO, Ye. Yu.

UDC: 621.398.67.001.2

"Required Longitudinal Boundaries of the Pre-Field for Shortwave Antennas"

V sb. Radioelektron. v nar. kh-vy SSR, Ch. 2 (Radioelectronics in the National Economy of the USSR, Part 2--collection of works) Kuybyshev, 1970, pp 197-208 (from RZh-Radiotekhnika, No. 3, March 71, Abstract No. 3B103)

Translation: A possible method for determining the required longitudinal dimensions of the pre-field for different types of short-wave antenna with horizontal polarization is considered. It is assumed that the surface of the earth in the area around the antenna is a smooth, ideally conducting plane. The different criteria of the degree of directional diagram lobe formation are compared. Conclusions are drawn concerning the traveling wave propagated over in-phase vertical lattices and horizontal lattices. Seven illustrations, bibliography of one. N. S.

1/1

USSR

UDC: 621.396.67.001.5

SHERED'KO, Ye. Yu.

"Results of Experiments to Determine the Required Dimensions of the Pre-Field in Shortwave Antennas"

V sb. Radioelektron. v nar. kh-vu SSSR. Ch. 2 (Radioelectronics in the National Economy of the USSR, Part 2--collection of works)
Kuybyshev, 1970, pp 183-196 (from RZh-Radiotekhnika, No. 3, March 71, Abstract No. 3B104)

Translation: Results are given of experiments for determining the required dimensions of the pre-field for antennas of the cophase horizontal type and for establishing criteria for estimating the degree of formation of the fundamental lobe of the directional diagram in the vertical plane. The measurements were conducted on horn analogies of cophase antennas. Curves are plotted for estimating the permissible degree of shading. Eight illustrations.
N. S.

1/1

USSR

UDC 541.127

SHEREMET, N. G., VASIL'YEV, A. F., KHASKIN, B. A., and MEL'NIKOV, N. N.

"Kinetics of the Reaction of 4,4'-Dipyridyl With Trimethyl Phosphate"

Leningrad, Zhurnal Obshchey Khimii, Vol 43 (105), No 12, Dec 73, pp 2735-2738

Abstract: It was shown that the rate of the reaction of 4,4'-dipyridyl with trimethyl phosphate in presence of water can be described by the kinetic equation for a sequential-parallel two stage reaction. The reaction rate constant depends on the amount of water in the reaction mixture.

1/1

- 39 -

1/2 038
TITLE--ON SOME CHANGES IN RESPIRATORY PROPERTIES OF BLOOD AND ITS COPPER
CONTENT IN TRAUMATIC SHOCK -U-
AUTHOR--SHERMET, P.F., KOVALCHUK, I.A.
COUNTRY OF INFO--USSR
SOURCE--VESTNIK KHIRURGII IMENI I. I. GREKOVA, 1970, VOL 104, NR. 2, PP
65-66
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--BLOOD CHEMISTRY, COPPER, RESPIRATION, TRAUMATIC SHOCK, OXYGEN,
CARBON DIOXIDE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1985/1728
STEP NO--UR/0589/70/104/002/0055/0066
NO--AP0101781
UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--11SEP70

2/2 038

CIRC ACCESSION NO--AP0101781

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE WORK DEALS WITH AN ACTUAL PROBLEM OF STUDYING THE CHANGES OCCURRED IN TRAUMATIC SHOCK. IN THE PAPER CHANGES IN GAS AND COPPER CONTENT OF BLOOD ARE PRESENTED. THE RESULTS OF THIS INVESTIGATION HAVE DEMONSTRATED THAT DURING TRAUMATIC SHOCK MARKED DISTURBANCES IN RESPIRATORY PROPERTIES OF BLOOD OCCUR REDUCED OXYGEN CONTENT IN VENOUS AND ARTERIAL BLOOD, INCREASED UTILIZATION OF OXYGEN BY TISSUES, CONSIDERABLE CHANGES IN THE AMOUNT OF CARBON DIOXIDE IN VENOUS AND ARTERIAL BLOOD. SIMULTANEOUSLY, MARKED INCREASE OF THE COPPER CONTENT IN BLOOD WAS NOTED THAT COULD BE REGARDED AS A COMPENSATORY AND ADAPTATION ACT OF THE ORGANISM IN TRAUMATIC SHOCK.

UNCLASSIFIED

1/2 025 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--STUDY OF THE EXCRETION OF PURINES AND URIC FROM URINE OF PATIENTS
SUFFERING FROM LEUKEMIA WITH VARIOUS CONTENT OF COBAMIDE COMPOUNDS IN
AUTHOR--(05)-MYASISHCHEVA, N.V., SHEREMET, Z.I., LEVINA, G.D., LORIE,
YU.I., RAUSHENBAKH, M.O.
COUNTRY OF INFO--USSR
SOURCE--PROBL GEMATOL PERELIV KROVI 15(1), 36-43. 1970
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--LEUKEMIA, URINE, ORGANIC ACID, PURINE, EXCRETION, VITAMIN,
COBALT COMPOUND
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1996/0248 STEP NO--UR/9080/70/015/001/0036/0043
CIRC ACCESSION NO--AP0117500
UNCLASSIFIED

2/2 025

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0117500

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A TOTAL OF 24 PERSONS WERE EXAMINED. IN THE PATIENTS WITH INCREASED LEVEL OF B SUB12 IN THE BLOOD NOT ONLY AN INTENSIFIED EXCRETION IN URIC ACID WAS SEEN, BUT ALSO AN INTENSIFIED EXCRETION OF PURINES AND OF THEIR METHYLATED DERIVATIVES. FACILITY: INST. EXP. CLIN. ONCOL., ACAD. MED. SCI. USSR, MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC: 681.327.76

2

PEGOYEV, A. N., TRIFONOV, V. V., BUDRIS, M. V. K., LEMZYAKOV, S. R., TARASOV, V. A., SHEREMET'YEV, A. K., Leningrad Electrical Engineering Institute of Communications ~~Imeni V. I. Ul'yanov (Lenin)~~

"A Digital Memory Unit"

Moscow, Otkryitiya, izobreteniya, promyshlennyye obraztzy, tovarnyye znaki, No 9, Mar 71, Author's Certificate No 297071, Division G, filed 10 Dec 66, published 2 Mar 71, p 162

Translation: This Author's Certificate introduces: 1. A digital memory unit based on a magnetostriction delay line with cadence pulse generator. As a distinguishing feature of the patent, the effect of variations in ambient temperature is reduced by adding a magnetostriction resonator in the cadence pulse generator made from the same material as the acoustic line in the delay unit. 2. A modification of this memory unit distinguished by the fact that mismatch between the period of the delay line and the cadence pulse period due to nonuniformity in heating of sections of the device is eliminated by utilizing a heater such as the regulating transistor of an electronic voltage stabilizer for the supply system of the device. 3. A modification of this device distinguished by the fact that the range of permissible variations in ambient temperature is extended by adding a system for precisely

1/2

USSR

UDC 621.383.292.8

PEGOYEV, A.N., TRIFONOV, V.V., EUDRIS, M.V., TARASOV, V.A., LEMZYAKOV, S.R.,
SHEREMET'YEV, A.K. [Leningr. elektrotekhn. in-t -- Leningrad Electrical Engineer-
ing Institute]

"Source Of High Voltage For Supply Of A Photomultiplier"

USSR Author's Certificate No 266860, filed 8 July 66, published 15 July 70 (from
RZh--Elektronika i yeye primeneniye, No 2, February 1971, Abstract No 2A259P)

Translation: The proposed source of high voltage for supply of a photomultiplier contains a voltage regulator, the input of the comparison element of which is connected to the output of the first section of the voltage converter. As the operating element of the regulator a single-cycle pulse generator with controlled frequency is used, and as a comparison element for the regulator, a silicon stabilatron. S.D.

1/1

- 45 -

Amplifiers

USSR

UDC: 621.375.8

SHEREMET'YEV, E. V., VERTOPRAKHOVA, L. S., Institute of Automation and Electrometry, Siberian Department of the Academy of Sciences of the USSR

"A Parametric Amplifier"

USSR Author's Certificate No 262982, filed 4 Nov 68, published 2 Jun 70
(from RZh-Radiotekhnika, No 12, Dec 70, Abstract No 12D320 P)

Translation: This Author's Certificate introduces a parametric amplifier which contains a capacitive balanced modulator on four blocked diodes, a pumping oscillator with master circuit, a selective amplifier and an amplitude detector. To increase thermal stability and simplify tuning, the above-mentioned capacitive modulator has its input diagonal connected in a resonance capacitance-inductance tank in the amplifier, and the feed diagonal is connected in the resonance tank of the pumping oscillator; the inductances and capacitances in the amplifier and oscillator tank circuits are equal in value.

1/1

USSR

UDC 621.375.6

SHEREMET'YEV, E. V., VERTOPFAXKOVA, L. B.

"Parametric Low-Frequency Resonance Amplifiers. A Survey"

V sb. Entsiklopediya izmereniy kontrolya i avtomatiz. (Encyclopedia of Monitoring and Automation Measurements--collection of works), Vyp. 14, Moscow, "Energiya", 1979, pp 27-30 (from RZh-Radiotekhnika, No 10, Oct 70, Abstract No 10D290)

Translation: The authors present a survey of works on the most promising low-noise, low-frequency amplifiers -- parametric resonance amplifiers. Low-frequency parametric resonance amplifiers of the capacitive type (based on blocked PN junctions) and the inductive type (based on ferrites and thin films with orthogonal magnetic control) are discussed. Expressions are given for the gain, passband and noise factor of the amplifiers. The basic problems of developing low-frequency parametric amplifiers are considered: selection of reactive elements, pumping oscillator, means of preventing the effect of the second harmonic, change in reactance, etc. Five illustrations, bibliography of thirty titles. Resumé.

1/1

1/2 024 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--A PARAMETRIC AMPLIFIER -U-
AUTHOR--SHEREMETEV, E.V., VERTQPRAKHOVA, L.S. S
COUNTRY OF INFO--USSR
SOURCE--U.S.S.R. 262982
REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI NR 7, 4 FEB
DATE PUBLISHED-----70

SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR.
TOPIC TAGS--PARAMETRIC AMPLIFIER, PATENT, DIODE CIRCUIT, CAPACITOR,
ELECTRIC INDUCTANCE, THERMAL STABILITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1992/1090 STEP NO--UR/0482/59/000/000/0000/0000

CIRC ACCESSION NO--AA0112213
777777777777 UNCLASSIFIED

2/2

024

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AA0112213

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. THIS AUTHOR'S CERTIFICATE INTRODUCES A PARAMETRIC AMPLIFIER WHICH CONTAINS A BALANCED CAPACITANCE MODULATOR BASED ON FOUR BLOCKED DIODES, A PUMPING OSCILLATOR WITH MASTER CIRCUIT, A SELECTIVE AMPLIFIER AND AN AMPLITUDE DETECTOR. IT DIFFERS BECAUSE TO INCREASE THERMAL STABILITY AND SIMPLIFY TUNING, THE CAPACITANCE MODULATOR IS CONNECTED THROUGH ITS INPUT DIAGONAL INTO THE INDUCTANCE CAPACITANCE RESONANCE CIRCUIT OF THE AMPLIFIER, AND AT THE SAME TIME IS CONNECTED THROUGH ITS FEED DIAGONAL TO THE TANK OF THE PUMPING OSCILLATOR. THE INDUCTANCE AND CAPACITANCE OF THIS TANK ARE EQUAL IN AMPLITUDE TO THE ANALOGOUS ELEMENTS OF THE AMPLIFIER TANK CIRCUIT.

AA0051770

СЕРЕБРЯКОВ, Е.В.

UR 0482

Soviet Inventions Illustrated, Section II Electrical, Derwent, 1/70

237022 MAGNETOMODULATION SENSOR, of increased sensitivity, the circuit for which is shown in the diagram; it consists of a generator (1) connected to the exciter (2), the core (3) being of moldly-magnetic material, with the measuring coil (4) having a measuring inductance L_1 , and also including the reactive components L_2 , C_1 , C_2 and C_3 which form, together with L_1 , a bridge arrangement. When excited by current from (1) the winding (2) generates a sinusoidal magnetic field of frequency ' ω ' and amplitude H_m which periodically changes the magnetic condition of the core (3). When a measured magnetic field H_0 is present in the measuring coil, an e.m.f. at the 4th harmonic of the excitation frequency is set up as well as a combinational frequency. This e.m.f. increases due to parametric amplification effects and is divided between the

1/2

4

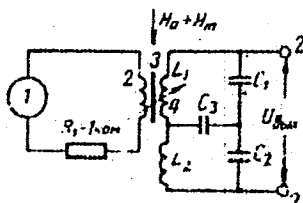
19820121

AA0051770

Institut Avtomatiki i Elektrometrii AN SSSR

remainder of the components of the bridge circuit in the described manner, resulting in a signal of increased strength. An algebraic equation for determining the strength of the e.m.f. is included, together with a graph which relates sensitivity of the sensor with excitation field.

2.9.66 as 1100773/18-24. B.M. ROGACHEVSKIY & E.V. SHEREMET'YEV. INST. OF AUTOMATION & ELECTROMETRY
WITHIN THE ACAD. OF SCIENCES OF THE USSR. (16.6.69)
Bul 7/3.2.69. Class 74b. Int.Cl.G 08c.



EB

19820122

ELECTRONICS

Amplifiers

USSR

UDC 621.375.124:621.375.9

S
SHEREMET'YEV, E. V., VERTOPRAKHOVA, L. S., Institute of Automation and Electrometry, Siberian Department of the Academy of Sciences of the USSR

"A Parametric Amplifier"

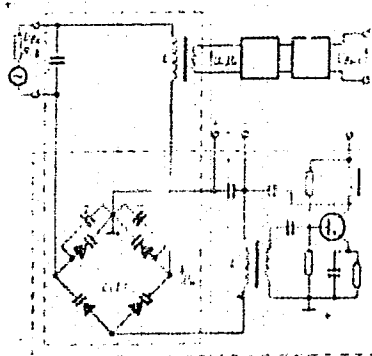
Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 7, 4 Feb 70, p 46, Patent No 262982, Filed 4 Nov 68

Translation: This Author's Certificate introduces a parametric amplifier which contains a balanced capacitance modulator based on four blocked diodes, a pumping oscillator with master circuit, a selective amplifier and an amplitude detector. It differs because to increase thermal stability and simplify tuning, the capacitance modulator is connected through its input diagonal into the inductance-capacitance resonance circuit of the amplifier, and at the same time is connected through its feed diagonal to the tank of the pumping oscillator. The inductance and capacitance of this tank are equal in amplitude to the analogous elements of the amplifier tank circuit.

1/2

USSR

SHEREMET'YEV, E. V., et al., Otkrytiya, Izobreteniya, Promyshlennyye Obrazttsy, Tovarnyye Znaki, No 7, 4 Feb 70, p 46, Patent No 262982, Filed 4 Nov 68



2/2

USSR

UDC 656.61:658.382.3:65.014:629.123

SHEREMET'YEV, Yu. N.

Okhrana Truda i Organizatsiya Sluzhby na Morskikh Sudakh (Labor Safety and Organizing Work on Sea-Going Vessels), Moscow, "Transport," 1971, 99 pp

Translation: Annotation: This reference work deals with questions of organizing work on ships, the rules of safety engineering, production sanitation, and fire safety to the extent necessary for regular personnel on vessels of the maritime fleet.

The book is intended for students in maritime schools, trade and vocational schools, training course combines, and individual-brigade study.

Table of Contents:

	Page
Chapter 1. Organizing Work on Ships	3
Regulations of Work on Ships	3
General Obligations of the Crew	3
State Flag of the USSR, Pennant, Ceremonies, and Greetings	6
Rights, Obligations, and Subordination of Command Personnel and Members of Ship's Command	8

1/3

USSR

UDC 547.832.759+ 542.95

KUTKEVICHUS, S. I., and SHERENAS, K. S., Kaunas Polytechnical Institute

"Study of the Reaction Products of Epichlorophydrine with Aromatic Amines. XII. 3-Substituted 1,2,3,4-Tetrahydrobenzo[h]quinolines and 2-Substituted Benz[g]indolines"

Riga, Khimiya Geterotsiklicheskikh Soyedineniy, No 8, Aug 72, pp 1111-1116

Abstract: 2-(Hydroxymethyl)benz[g]indoline (I) can be obtained from 2-(Chloromethyl)benz[g]indoline or 3-chloro-1,2,3,4-tetrahydrobenzo[h]quinoline. A better synthetic method consists of heating N-acetyl-2-(chloromethyl)benz[g]indoline (II) in dimethylsulfoxide in presence of alkaline metal salts and weak acids. The 2-(acetylhydroxymethyl)benz[g]indoline formed converts easily to (I). (II) can be synthesized either from pure 2-(chloromethyl)benz[g]indoline or from its mixture with 3-chloro-1,2,3,4-tetrahydrobenzo[h]quinoline which is obtained from the reaction of 3-hydroxy-1,2,3,4-tetrahydrobenzo[h]quinoline with phosphorus oxychloride. Following compounds were obtained: 3,6-dichloro-1,2,3,4-tetrahydrobenzo[h]quinoline, m.p. 198°; 5-chloroazirido[1,2-a]benz[g]indoline, m.p. 41.5-43°; and a series of 2-substituted derivatives of 5-chlorobenz[g]indoline.

1/1

USSR

UDC 547.832'759

KUTKEVICHUS, S. I., SHERENAS, K. S., and POSHYUNAS, R. I., Kaunas Poly-technical Institute

"Study of the Reaction Products of Epichlorohydrine With Aromatic Amines. XVII. 2-Halomethyl-2,3-dihydro-1H-benz[g]indoles, 3-Halo-1,2,3,4-tetrahydrobenzo[h]quinolines and Their Derivatives"

Riga, Khimiya Geterotsiklicheskikh Soyedinenii, No 3, Mar 73, pp 342-346

Abstract: Reacting 7a,8-dihydro-7H-azirino[1,2-a]benz[g]indole with hydrogen halides yields 2-halomethyl-2,3-dihydro-1H-benz[g]-indoles and 3-halo-1,2,3,4-tetrahydrobenzo[h]quinolines which could be further reacted to yield respective N-nitroso and finally isonitroso derivatives. Heating 1-benzoyl-2-halomethyl-2,3-dihydro-1H-benz[g]indoles yields 2-(benzoyloxymethyl)-2,3-dihydro-1H-benz[g]indole hydrohalides. Reaction of 3-halo-1,2,3,4-tetrahydrobenzo[h]quinolines with thionyl chloride at room temperature yields 3-halo-6-chloro-1,2,3,4-tetrahydrobenzo[h]quinolines; when the reaction is carried out at refluxing temperature, the product is 6-chlorobenzo[h]quinoline.

1/1

USSR,

UDC 532.5

NETYUKHAYLO, A. P., TELEZHKIN, E. D., SHERENKOV, I. A.

"Transfer of Momentum in a Two-Dimensional Headless Stratified Flow of an Incompressible Fluid"

Tr. Khar'kov. otd. vod. kh-va prompredpriyatiy VNI VODGYesO (Works of the Khar'kov Department of Water Economy of Industrial Enterprises of the All-Union Scientific Research Institute of Water Supply, Sewer Systems, Hydraulic Engineering Structures, and Engineering Hydrogeology), 1971, No. 9, pp 33-47 (from RZh-Mekhanika, No 3, Mar 72, Abstract No 3B565)

Translation: The results of various theoretical and experimental studies of flow regimes in open stratified flows are generalized under plane problem conditions. Dimensionless criteria R , F' , P and P_T are obtained from the Navier-Stokes, continuity, diffusion and heat conductivity equations, the observance of which ensures dynamic similarity of stratified flows if geometrical similarity and boundary conditions are fulfilled. If boundary conditions in the flow are fixed it is proposed that the following condition be used for determining the transition boundary from stable stratification of a given form to neutral stratification: $RF'^2 = C \leq C_{cr}$, where R and F' are the Reynolds number and Froude

1/2

USSR

NETYUKHAYLO, A. P., et al, Tr. Khar'kov. otd. vod. kh-va prompredpriyatiy VNI
VODGyeO, 1971, No. 9, pp 33-47

density number. Values of C_{cr} are given that determine the boundaries of five different forms (from laminar to turbulent) of the flow in the boundary layer of the separation of liquids of different density. The characteristics of the exchange of momentum through the interface are given on the basis of analysis of graphs of the distribution of total tangential stresses over the thickness of the boundary layer of the separation for the most characteristic forms of the flow in this layer. Certain statements are made concerning the determination of the coefficient of exchange of momentum k as a function of the Richardson number R^* , and the relationship $R^* = sC^{m_1}$ is proposed for calculating this number, where s and m_1 are empirical coefficients. 16 ref. V. B. Dul'nev.

2/2

- 40 -

1/2 013 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--STABLE OSTEOSYNTHESIS OF THE UPPER HALF OF THE FEMUR -U-
AUTHOR--(02)-SIVASH, K.M., SHEREPO, K.M.
COUNTRY OF INFO--USSR
SOURCE--OROTP TRAVMATOL PROT 31(2): 64-67. ILLUS. 1970
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--BONE FRACTURE, MEDICAL PATIENT
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY FICHE NO----F070/605015/F05 STEP NO--UR/9115/70/031/002/0064/0067
CIRC ACCESSION NO--AP0140639
UNCLASSIFIED

2/2 013

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0140639

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CLINICAL EXPERIENCES IN THE TREATMENT OF 70 PATIENTS WITH FRACTURES OF THE DIAPHYSIS OF THE FEMUR INVOLVING THE USE OF THE CORKSCREW PIN DESIGNED BY K. M. SIVASH, THE V. T. 5-1 HAVE SHOWN THAT THIS METHOD ALLOWS THE INDUCTION OF STABLE OSTEOSYNTHESIS OF THE PROXIMAL SEGMENT OF THE FEMURAL DIAPHYSIS AND THE EARLY RESTORATION OF THE FUNCTION OF ALL THE EXTREMITAL JOINTS. IT PREVENTS THE DEVELOPMENT OF LESSENER MOBILITY AND JOINT CONTRACTURES, AND INSURES THE EARLIER RESTORATION OF THE ABILITY TO WALK AND RECOVERY OF THE SUPPORTIVE FUNCTION OF THE LIMB OF THE PATIENT. FACILITY: CENT. INST. TRAUMATOL. ORTHOPED., MIN. HEALTH USSR, MOSCOW, USSR.

UNCLASSIFIED

SHERESHEVSKIY, A. M.

PSYCHIATRY

1-9605

UDK 616.89-08:355-3) "1904 - 1905"

135

18516

ORGANIZATION OF SPECIALIZED PSYCHIATRIC ASSISTANCE
IN THE RUSSO-JAPANESE WAR AND
THE CREATION OF MILITARY PSYCHIATRY
S. I. BULDIN
Cand. of Med. Sciences, Major, Med. Service, A. M. Shereshevskiy
MOSCOW
NOV 1993

Direct psychiatric assistance to front line troops in combat was organized in Russia, for the first time, during the Russo-Japanese war of 1904 - 1905. Throughout almost all of 1904, this operation was controlled by the military, but by the end of 1904 it was placed under the authority of the Russian Society of the Red Cross.

A decision of the military-medical scientific committee in June 1905 called for the creation of psychiatric departments, starting with the military regions of the Amur River (the Primorsky region), the Siberian military region -- primarily in the cities of Khabarovsk, Chita and Irkutsk. However, as military operations expanded, the number of mentally ill servicemen requiring immediate specialized medical attention grew considerably. At first, men were placed in hospitals, together with the mental patients, although as early as March 1904, psychiatric patients of the Russo-Japanese war, tried to group them together -- at least, to some extent -- at the reserve field hospital No. 7. However, at the Khabarovsk hospital No. 1, a six-room building was set aside for psychiatric patients. Because the number of such patients increased greatly by the fall of that year, the psychiatric department of the Khabarovsk hospital was expanded to 30 beds. In 1904, the scientific committee of the Red Cross formed a commission under the chairmanship of therapist professor V. N. Shrobinin, to discuss the question of "the struggle with mental diseases which may arise in the far East as well as in the armies in the field." In August, this question was definitely decided. For this, in the field, and the development of a psychiatric department of the military regional military hospital. Doctor of Medicine P. M. Avdeyev, who was sent to set up treatment centers in the rear of the Red Cross. Preparation of the middle and lower medical personnel was entrusted to the psychiatric clinic of the Military Medical Academy headed by V. N. Shrobinin.

The Russian Society of the Red Cross assumed more than half of the financial expenditures involved in organizing psychiatric assistance and assigned physicians and supporting personnel to the various units. In order to complete the organization of psychiatric medical-evacuation centers, the Red Cross, a commission was created under the chairmanship of V. N. Shrobinin, which also included the noted psychiatrist N. N. Zilberstein, N. N. Korotkiy and N. S. Danilovskiy. The recommendations of this commission served as the basis for the specialized psychiatric assistance during the Russo-Japanese war.

What did the psychiatric assistance to the Russian army in the war consist of? Mental cases which appeared in the front lines as well as in the rear echelons of the army, had to be placed, ordinarily in ordinary general somatic hospitals and field stations, and only then would they be transferred to special centers. However, field psychiatric centers soon began to function in the immediate vicinity of the front lines. Thus, for example, such a Red Cross reception center functioned since December 1904, at Irkutsk and from March to October 1905 at Oymyakon.

[illegible]

APPROVED FOR RELEASE: 07/20/2001

CIA-RDP86-00513R002202920006-8"

[illegible]

Organ and Tissue Transplantation

USSR

UDC 612.6.02.017.014.482

SHERESHKOV, S. I., Laboratory of Myelohemotherapy of Acute Radiation Sickness,
Central Institute of Hematology and Blood Transfusion, Ministry of Public Health
USSR, Moscow

"The Local 'Transplant Versus Host' Reaction in Irradiated and Normal Dogs"

Moscow, Problemy Gematologii i Perelivaniya Krovi, Vol 15, No 7, Jul 70, pp 22-27

Abstract: It was previously observed that, when dogs are irradiated, the intensity of the normal lymphocyte transfer (MLT) reaction is reduced. The mechanism of this reaction was studied in dogs with a view to possible applications in the choice of donors for organ and tissue transplants. The data obtained indicated that in some cases a weak correlation exists between the intensity of the MLT-reaction and the time of breakdown of a skin transplant by donor lymphocytes. In other cases a reverse correlation was observed. The intensity of the MLT-reaction in dogs apparently depends not only on the degree of histological compatibility of donor and recipient but also on such factors, as the individual nonspecific activity of lymphocytes and the nonspecific reactivity of the recipient.

1/1

1/2 012 UNCLASSIFIED PROCESSING DATE--11DEC70
TITLE--ZINC CHLORIDE INDIUM CHLORIDE PHASE DIAGRAM --U--

AUTHOR--(03)-KUKUYEV, A.A., MALYUGIN, A.S., SHERESKHODYA, V.I.

COUNTRY OF INFO--USSR

SOURCE--ZH. PRIKL. KHIM. (LENINGRAD) 1970, 43(3), 663-5

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--PHASE DIAGRAM, ZINC CHLORIDE, PHYSICAL CHEMISTRY PROPERTY,
MELTING POINT, INDIUM CHLORIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3004/C959

STEP NO--UR/0080/70/043/003/0683/0685

CIRC ACCESSION NO--AP0131544

UNCLASSIFIED

2/2 012

UNCLASSIFIED

PROCESSING DATE--11DEC70

CIRC ACCESSION NO--AP0131544

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN THE ZNCL SUB2 INCL SYSTEM, THE FORMATION OF 2ZNCL SUB2 INCL AND ZHCL SUB2 2INCL SPECIES OCCURS. THE 1ST OF THEM CONTG. 35.5 WT. PERCENT INCL MELTS INCONGRUENTLY AT 227DEGREES; ZNCL SUB2 2INCL CONTAINS 69 WT. PERCENT INCL AND MELTS CONGRUENTLY AT 211DEGREES. FROM THE PHASE DIAGRAM OF THE TITLE SYSTEM, THE M.P.S. OF PURE ZNCL SUB2 AND INCL WERE 318DEGREES AND 224DEGREES, RESP.
FACILITY: SEVERO-KAVKAZ. GORNOMET. INST., GRDZHONIKIDZE, USSR.

UNCLASSIFIED

USSR

UDC 669.15'24:669.014.623

1

POMARIN, YU. M., GRIGORENKO, G. M., LAKOMSKIY, V. I., TORIKHOV, G. F., and
SHEREVERA, A. V., Kiev

"On the Solubility of Nitrogen in Iron-Nickel Melts"

Moscow, Izvestiya Akademii Nauk SSSR, Metally, No 4, Jul/Aug 72, pp 32-36

Abstract: The solubility of nitrogen in iron, nickel, and iron-nickel alloys with 21.5% Ni and 59.0% Ni was experimentally investigated by the method of smelting the metal in an electromagnetic field in a gas flow (Ar, N, He) with subsequent hardening. The N solubility in Fe was investigated in the 1870-2860°K temperature interval, and in Fe-Ni alloys in the interval from the melting point to 2500°K. The temperature dependences of N solubility in Fe, Ni, and Fe-Ni alloys and the effect of Ni concentration in Fe-Ni alloys on the N heat of solution are shown. The temperature dependences of the N interaction parameter for Fe-Ni alloys are compared with data of other authors. The N solubility in Fe-Ni alloys was found to comply with the square root principle. An analytical expression was derived for the dependence of N solubility on the temperature and the Ni concentration in the Fe alloy. Five illustrations, one table, three formulas, twelve bibliographic references.

1/1

1/2 020 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--TEMPERATURE DEPENDENCE OF DENSITY AND SURFACE TENSION OF
IRON, SILICON MELTS -U-
AUTHOR-(03)-POPEL, S.I., SHERGIN, L.M., TSAREVSKIY, B.Y.
COUNTRY OF INFO--USSR
SOURCE--ZH. FIZ. KHIM. 1970, 44(1), 260-1
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS
TOPIC TAGS--IRON ALLOY, SILICON ALLOY, SURFACE TENSION, HIGH PURITY METAL,
FERROUS LIQUID METAL
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1999/1106 STEP NO--UR/D076/70/044/001/0260/0261
CIRC ACCESSION NO--AP0123098

UNCLASSIFIED

2/2 020

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0123098

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE D. AND SURFACE TENSION OF THE
FE-SI MELTS WERE DETD. FROM THE LIQUIDUSLINE UP TO 1850DEGREES BY
MEASURING THE DIMENSIONS OF THE MELT DROPLETS IN A BEO CURCIBLE. THE
MAX. DEVIATIONS OF THE MOL. VOLS. FROM THE ADDITIVITY RULE (15PERCENT)
WERE FOUND AT SIMILAR TO 50 AT. PERCENT SI. SURFACE TENSION AT
1550DEGREES DECREASES FROM ABOUT 1750 MJ-M PRIME2 (FE) TO 700 MJ-M
PRIME2 (SI) ACCORDING TO AN S SHAPED CURVE. THE TEMP. COEFFS. OF
SURFACE TENSION D SIGMA-DT CHANGE FROM MINUS 0.35 FOR PURE FE TO MINUS
0.05 MJ-M PRIME2 FDEGREESC FOR PURE SI. FACILITY: URAL.
POLITEKH. INST. IM. KIROVA, SVERDLOVSK, USSR.

UNCLASSIFIED

1/2 013
TITLE--STABLE OSTEOSYNTHESIS OF THE UPPER HALF OF THE FEMUR -U-
AUTHOR--(02)-SIVASH, K.M., SHEREPO, K.M.
COUNTRY OF INFO--USSR
SOURCE--OROTP TRAVMATOL PROT 31(2): 64-67. ILLUS. 1970
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--BONE FRACTURE, MEDICAL PATIENT
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY FICHE NO----FD70/605015/F05 STEP NO--UR/9115/70/031/002/0064/0067
ACCESSION NO--AP0140639
UNCLASSIFIED

2/2 013
CIRC ACCESSION NO--AP0140639
ABSTRACT/EXTRACT--(U) GP-0-
UNCLASSIFIED
PROCESSING DATE--04DEC70
ABSTRACT. CLINICAL EXPERIENCES IN THE
TREATMENT OF 70 PATIENTS WITH FRACTURES OF THE DIAPHYSIS OF THE FEMUR
INVOLVING THE USE OF THE CORKSCREW PIN DESIGNED BY K. M. SEVASH, THE V.
T. 5-1 HAVE SHOWN THAT THIS METHOD ALLOWS THE INDUCTION OF STABLE
OSTEOSYNTHESIS OF THE PROXIMAL SEGMENT OF THE FEMURAL DIAPHYSIS AND THE
EARLY RESTORATION OF THE FUNCTION OF ALL THE EXTREMITAL JOINTS. IT
PREVENTS THE DEVELOPMENT OF LESSENER MOBILITY AND JOINT CONTRACTURES,
AND INSURES THE EARLIER RESTORATION OF THE ABILITY TO WALK AND RECOVERY
OF THE SUPPORTIVE FUNCTION OF THE LIMB OF THE PATIENT. FACILITY:
CENT. INST. TRAUMATOL. ORTHOPED., MIN. HEALTH USSR, MOSCOW, USSR.

UNCLASSIFIED

LEBBLE

Card. of Med. Sciences, Major, to form the Psycho-ligatures
Direct Psychiatric assistance to form the Psycho-ligatures
on organized in 1905. Throughout 1905, it was placed under
but by the end of 1905, it was placed under

[illegible]

that did the psychological acrobatics to the German army in the war just completed? Mental cases which appeared to be cured, only then to relapse, and which were sent to the front lines as "normal" soldiers? In ordinary "normal" soldiers to mobilize and to function in the immediate center of the front lines? For example, such a bad Cross reaction center functioned since December 1904 at Hockman and from March to October 1905 at Gumbulzin.

JPRS 60754

12 December 1973

SHERESHEVSKI, O.V.
 LATEST DEVELOPMENTS IN UHF-THERAPY DOSIMETRY PROCEDURES
 by O. V. Shereshevskiy of the Central
 Scientific Research Institute of Health-Resort Therapy and Physi-
 cal Therapy and of the All-Union Scientific Research Institute of
 Medical Instrument Engineering, Moscow, Meditsinskaya Tekhnika,
 No 5, 1973, pp 10-15, signed to press 5 September 1973,
 UDC 615.846.015.31

The effect of an ultrahigh-frequency electrical field on
 the organism for therapeutic purposes (UHF-therapy) proved it-
 self a long time ago as one of the most effective methods for
 treating acute and chronic inflammatory processes, including
 purpurative processes, postoperative infections, the results of
 poliomyelitis, and a number of other maladies. The results of
 a survey carried out in (1), which showed that UHF-therapy proce-
 dures are carried out in 47% of the total number of electrotherapeutic proce-
 dures in hospitals and 47% in polyclinics, also attest to this.

However, in spite of the broad application and the exten-
 sive clinical experience in utilizing UHF-therapy, the problem
 of objective UHF-therapy dosimetry procedures has remained
 practically unsolved up to the present time. In particular,
 the fact, that none of the domestic UHF-therapeutic instruments

(1 - USSR - C)

- 1 -

(2)

In a result of the work carried out at the All-Union Scientific Research Institute of Instrument Engineering an instrument was developed for measuring the power absorbed by a patient undergoing UHF-therapy procedures. The schematic diagram of this device is shown in Fig. 1. The measurement of the UHF-therapy power is carried out in the output channel of the high-frequency device which is loading in the output channel is accomplished utilizing a quadrature wattmeter A, which performs a quasi-steady-state method of measuring power by utilizing the three magnitudes: U_1 , $\cos \phi$. Since the accuracy of such a wattmeter drops sharply and overloads, acting on the square elements of the circuit, sharply increase at small values of $\cos \phi$ (2), then the connecting of it directly to the output of the instrument (at points aa) is not possible, since the $\cos \phi$ of an equivalent load at these points in a number of procedures can take very small values (of the order of 0.01) (3). Thus, the wattmeter is connected in aperiodic intermediate circuit 1, joining the anode circuit 2 of the generator with the patient circuit, where, as a theoretical investigation of the output channel of the instrument showed (4), values of $\cos \phi$ of not less than 0.3-0.5 can be ensured with all types of procedures, which is sufficient for the practical measurement of the transmitted power. However, due to the fact that the efficiency of the patient circuit essentially depends on the type of procedure, then the determination of the power absorbed by the body tissues directly from the wattmeter readings can lead to a very great supplementary error, of as much as 25%. To reduce this supplementary error correction circuit 5 is specified, which makes it possible to eliminate from the wattmeter readings the magnitude of the power losses in the patient circuit.

1. Included in the patient circuit are the coils L_1 , the tuned capacitance C_1 , the feeder with the electrodes and the patient.

Organ and Tissue Transplantation

UDC 612.6.02.017.014.482

USSR

SHERESHKOV, S. I., Laboratory of Myelohemotherapy of Acute Radiation Sickness,
Central Institute of Hematology and Blood Transfusion, Ministry of Public Health
USSR, Moscow

"The Local 'Transplant Versus Host' Reaction in Irradiated and Normal Dogs"

Moscow, Problemy Gematologii i Perelivaniya Krovi, Vol 15, No 7, Jul 70, pp 22-27

Abstract: It was previously observed that, when dogs are irradiated, the intensity of the normal lymphocyte transfer (NLT) reaction is reduced. The mechanism of this reaction was studied in dogs with a view to possible applications in the choice of donors for organ and tissue transplants. The data obtained indicated that in some cases a weak correlation exists between the intensity of the NLT-reaction and the time of breakdown of a skin transplant by donor lymphocytes. In other cases a reverse correlation was observed. The intensity of the NLT-reaction in dogs apparently depends not only on the degree of histological compatibility of donor and recipient but also on such factors, as the individual nonspecific activity of lymphocytes and the nonspecific reactivity of the recipient.

1/1

1/2 012 UNCLASSIFIED PROCESSING DATE--110LC70
TITLE--ZINC CHLORIDE INDIUM CHLORIDE PHASE DIAGRAM -U-
AUTHOR-(03)-KORDYEV, A.V., MALYUGIN, A.S., SHERESKHCVA, Y.I.
COUNTRY OF INFO--USSR
SOURCE--Zh. Prikl. Khim. (Leningrad) 1970, 43(3), 683-5
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY, MATERIALS
TOPIC TAGS--PHASE DIAGRAM, ZINC CHLORIDE, PHYSICAL CHEMISTRY PROPERTY,
MELTING POINT, INDIUM CHLORIDE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3004/C959 STEP NO--UR/D08C/70/D43/D03/D683/D685
CIRC ACCESSION NO--AP0131944
UNCLASSIFIED

2/2 012

UNCLASSIFIED

PROCESSING DATE--11DEC70

CIRC ACCESSION NO--AP0131544

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN THE ZNCL SUB2 INCL SYSTEM, THE FORMATION OF 2ZNCL SUB2 INCL AND ZNCL SUB2 2INCL SPECIES OCCURS. THE 1ST OF THEM CONTG. 35.5 WT. PERCENT INCL MELTS INCONGRUENTLY AT 227DEGREES; ZNCL SUB2 2INCL CONTAINS 69 WT. PERCENT INCL AND MELTS CONGRUENTLY AT 211DEGREES. FROM THE PHASE DIAGRAM OF THE TITLE SYSTEM, THE M.P.S. OF PURE ZNCL SUB2 AND INCL WERE 318DEGREES AND 224DEGREES, RESP. FACILITY: SEVERO-KAVKAZ. GORNOMET. INST., ORDZHONIKIDZE, USSR.

UNCLASSIFIED

USSR

UDC 669.15'24:669.014.623

POMARIN, YU. M., GRIGORENKO, G. M., LAKOMSKIY, V. I., TORKHOV, G. F., and
SHEREVERA, A. V., Kiev

"On the Solubility of Nitrogen in Iron-Nickel Melts"

Moscow, Izvestiya Akademii Nauk SSSR, Metally, No 4, Jul/Aug 72, pp 32-36

Abstract: The solubility of nitrogen in iron, nickel, and iron-nickel alloys with 21.5% Ni and 59.0% Ni was experimentally investigated by the method of smelting the metal in an electromagnetic field in a gas flow (Ar, N, He) with subsequent hardening. The N solubility in Fe was investigated in the 1870-2860°K temperature interval, and in Fe-Ni alloys in the interval from the melting point to 2500°K. The temperature dependences of N solubility in Fe, Ni, and Fe-Ni alloys and the effect of Ni concentration in Fe-Ni alloys on the N heat of solution are shown. The temperature dependences of the N interaction parameter for Fe-Ni alloys are compared with data of other authors. The N solubility in Fe-Ni alloys was found to comply with the square root principle. An analytical expression was derived for the dependence of N solubility on the temperature and the Ni concentration in the Fe alloy. Five illustrations, one table, three formulas, twelve bibliographic references.

1/1

020
UNCLASSIFIED
TITLE--TEMPERATURE DEPENDENCE OF DENSITY AND SURFACE TENSION OF
IRON, SILICON MELTS -U-
AUTHOR--(03)-POPEL, S.I., SHERGIN, L.M., TSAREVSKIY, B.V.
COUNTRY OF INFO--USSR
SOURCE--ZH. FIZ. KHIM. 1970, 44(1), 260-1
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS
TOPIC TAGS--IRON ALLOY, SILICON ALLOY, SURFACE TENSION, HIGH PURITY METAL,
FERROUS LIQUID METAL
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1999/1106
CIRC ACCESSION NO--AP0123098
STEP NO--UR/0076/70/044/001/0260/0261
UNCLASSIFIED

2/2 020
CIRC ACCESSION NO--AP0123098 UNCLASSIFIED
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE D. AND SURFACE TENSION OF THE
FE-SI MELTS WERE DETD. FROM THE LIQUIDUSLINE UP TO 1850DEGREES BY
MEASURING THE DIMENSIONS OF THE MELT DROPLETS IN A BEG CURCIBLE. THE
MAX. DEVIATIONS OF THE ADL. VOLS. FROM THE ADDITIVYT RULE (15PERCENT)
WERE FOUND AT SIMILAR TO 50 AT. PERCENT SI. SURFACE TENSION AT
1550DEGREES DECREASES FROM ABOUT 1750 MJ-M PRIME2 (FE) TO 700 MJ-M
PRIME2 (SI) ACCORDING TO AN S SHAPED CURVE. THE TEMP. COEFFS. OF
SURFACE TENSION D SIGMA-DT CHANGE FROM MINUS 0.35 FOR PURE FE TO MINUS
0.05 MJ-M PRIME2 FDEGREESC FOR PURE SI. FACILITY: URAL.
POLITEKH. INST. IM. KIROVA, SVERDLOVSK, USSR.

UNCLASSIFIED

UDC 619:616.981.42-036.2:636.293.3

USSR

VOZHDAYEV, N. S., SHERGIN, YU. K., Candidates of Veterinary Sciences and
BELYAKOV, A. I., Kirgiz Scientific Research Institute of Livestock Raising
and Veterinary Medicine

"Epizootiology of Brucellosis Among Yaks"

Moscow Veterinariya, No 10, 1971, pp 64-66

Abstract: Brucellosis was first detected among yaks in Kirgizia in 1955 in the Central Tyan-Shan region and on the mountain pastures in the Issyk-Kul hollow. Since then it has spread to many other parts of the republic, and the incidence ranges from 0.27 to 71% in various herds. The disease is transmitted mainly by contact between sick and healthy animals or through the alimentary route due to numerous abortions and infection of the pastures with excretion from sick animals. The course of brucellosis in yaks may be acute or chronic. If chronic, most animals do not exhibit clinical symptoms and the final diagnosis must be based on serological, bacteriological, and biological examination. The disease is most prevalent in the spring and summer (mating and calving period), but prompt prophylactic serological examinations help to keep it from spreading.

1/1

UDC 547.26'118

USSR

TOROPOVA, V. F., CHERKASOV, R. A., SAVEL'YEVA, N. I., GRIGOR'YEVA, L. A.,
SHERGINA, I. V., OVCHINNIKOV, V. V., and PUDOVIK, A. N., Kazan' State
University imeni V. I. Ul'yannov-Lenin

"Study of Stability of Complexes of Silver, Nickel and Cobalt Ions With
Phosphorus Dithioacid Derivatives"

Leningrad, Zhurnal Obshchey Khimii, Vol 41, No 8, Aug 71, pp 1673-1676

Abstract: A study was made of the composition and stability of complex
compounds of silver ions with a series of phosphorus dithioacid derivatives,
as well as complexes of nickel and cobalt ions with diethyldithiophosphoric
acid by the potentiometric method in a 90-percent ethanol-aqueous solution at
an ionic strength of 0.3 and a temperature of 25°. Stability constants
($\log \beta_2$) are determined and correlated with constants for substituents
at the phosphorus atom in the molecule of the ligand, particularly for the
2,3-butylene glycol substituent.

1/1

- 43 -

UDC 547.26'118

USSR

PUDOVIK, A. N., CHERKASOV, R. A., and SHERGINA, I. V., Kazan' State University
imeni V. I. Ul'yanov-Lenin

"Reactions of the Ammonium Salts of Dithiophosphonates With Dialkoxyposphane-
methylchloromethyl Esters"

Leningrad, Zhurnal Obshchey Khimii, Vol 41 (103), No 3, Mar 71, pp 708-709

Abstract: The reaction of dialkoxyposphanemethylchloromethyl esters with
ammonium salts of O,O-dialkyldithiophosphoric acids and polyalkyleneglycold-
ithiophosphates was studied. The reaction occurred easily at 60-70° in
alcohol solution yielding α' -diethoxyphosphane- α -diethoxydithiophosphoryldi-
methyl ester, b.p. 160-160°/1 mm, d_4^{20} 1.2026, n_D^{20} 1.4898; α -diethoxyphosphane-
 α' -diisopropoxydithiophosphoryldimethyl ester, b.p. 153-54°/0.6 mm, d_4^{20} 1.1934,
 n_D^{20} 1.4915; polydiethyleneglycol-S-methyloxymethyldiethoxyphosphoryldithio-
phosphate, and its isopropyl permutations — all yellow resins.

1/1

UNCLASSIFIED

PROCESSING DATE--02OCT70

1/2 021

TITLE--SYNTHESIS AND SOME PROPERTIES OF POLY(ALKYLENE GLYCOL S,ALKYL
DITHIOPHOSPHATES) -U-

AUTHOR-(C3)-PUDOVIK, A.N., CHERKASOV, R.A., SHERGINA, I.V.

COUNTRY OF INFO--USSR

SOURCE--VYSOKOMOL. SOEDIN., SER. A 1970, 12(2), 343-7

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHEMICAL SYNTHESIS, POLYMER, GLYCOL, PHOSPHORUS SULFIDE,
EXOTHERMIC REACTION, THIOL, ISOMERIZATION, AMMONIUM SALT, COMPLEX
COMPOUND, AMINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1989/0255

STEP NO--UR/0459/70/012/002/0343/0347

CIRC ACCESSION NO--AP0106911

UNCLASSIFIED